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# Buffer Options *for the* Bay

## Vermont: River Corridor and Floodplain Management

Between 2010 and 2014, the Vermont General Assembly passed four distinct Acts (110 (2010), 138 (2012), 16 (2013), and 107 (2014)) directing the Agency of Natural Resources (ANR) to create a River Corridor and Floodplain Management Program to promote and encourage identification and protection of flood hazard areas and river corridors to reduce flood and fluvial erosion hazards. This dynamic way of looking at buffers acknowledges that when the adjacent water body changes shape—due to, for example, sea level rise or changes in groundwater—buffers change as well and communities must plan for that if they are to preserve ecosystem services in the future.

Vermont ANR delineates “river corridors” as areas of land surrounding a river that provide for the meandering, floodplain, and the riparian functions necessary to restore and maintain the naturally stable or least erosive form of the river. According to the agency, giving rivers room to move is critical to avoid increases in erosion that adversely affects public safety, riparian landowners, and river ecosystems. River corridors are comprised of the river meander belt and a riparian buffer. The meander belt area is calculated to accommodate the amplitude of future stream meanders that keep the river in equilibrium, and its width depends on the amount of land draining to a given point along the stream or river. As a result the width of the river corridor varies based on stream size.

The riparian buffer component is an extension of the meander belt that provides extra development setback space so that as the river meanders continue to grow, space still exists to establish or maintain a naturally vegetated buffer to prevent erosion and protect ecosystem function. Under the ANR program, all river corridors, except small streams with a drainage of less than or equal to two square miles, shall include a 50-foot setback as an extension on either side of the meander belt. For small streams, the 50-foot setback from each bank described in Section 4(b)(1) serves both meander and riparian buffer functions. The buffer may extend past the mapped line of a naturally confining feature (e.g., the toe of the natural valley wall), but shall not go beyond the boundary of an engineered levee, railroad, or federal aid highway.

Currently, Vermont towns are not required to adopt River Corridor Maps. However, Vermont ANR is required to create advisory river corridor maps for all municipalities, adopt State River Corridor

Protection Procedures that include BMP's, and draft model bylaws and other incentives to provide assistance for municipalities adopt corridor maps if they wish to protect river corridors at their community's level.

More information is available on the ANR website: [Flood Hazard Area and River Corridor Protection Procedure](#). This procedure describes the Stream Alteration Rule and Flood Hazard Area & River Corridor Rule.

[The Vermont Agency of Natural Resources \(ANR\) Rivers Program](#) prioritizes management decisions and actions that accommodate stream meander and floodplain processes that encourage natural river stability. They define stability as, "the ability of a stream, over time and in the present climate, to transport the flow and sediment of its watershed in such a manner that it maintains its dimension, pattern, and profile without aggrading or degrading." Such stability cannot be maintained without committed riparian corridor protection efforts. The Rivers Program provides technical assistance for river corridor planning, protection, and restoration projects statewide. For more information on [River Corridor Planning](#), consult the [River Corridor Planning Guide](#), the [River Corridor Protection Guide](#), or an example [Corridor Plan](#).

Vermont's [River Corridor Easement Program](#) is an incentives-based program encourages landowners "to allow for passive restoration of channel stability by allowing the natural erosive forces of the river to establish its least erosive form over time." Under a river corridor easement, landowners sell their rights to manage the area on their property that falls within the meander belt of sensitive and erosive streams. Once channel management rights are sold, often to a land trust, landowners cannot intervene with channel erosion or changes within the river corridor. They can no longer develop or build structures in the river corridor, and they must maintain a minimum 50-foot riparian buffer of native woody vegetation whose location floats with the river. For more information on Vermont's River Corridor Protection and River Corridor Easement programs, consult the [Vermont ANR Guide to River Corridor Easements](#).

[The Vermont Clean Water Initiative](#) is a new collaborative effort to protect water quality among state, local, and municipal agencies and partners including farmers, businesses, and the general public. The program coordinates projects to restore Vermont's rivers, streams, lakes, ponds, and wetlands. It awards approximately 60 grants. (Information on these projects is available in [annual reports of the Ecosystem Restoration Program](#)). The initiative also led to the [Clean Water Fund](#), which provides "additional state funds to help municipalities, farmers and others implement actions that will reduce pollution washing into Vermont's rivers, streams, lakes, ponds and wetlands." The fund is supported by a 0.2 % surcharge on property transfer taxes for properties valued at more than \$100,000, and the state is working to secure longer-term support. The fund supports river corridor easements and buffer restoration work, and it factors prominently as an incentive for riparian management. Information about these efforts is available in the [Vermont Clean Water Initiative Investment Report](#).

One of the greatest incentives Vermont has created to encourage communities to adopt river protection corridors is the increased state cost share from the [Emergency Relief and Assistance Fund](#)

[\(ERAF\)](#), which helps communities who have adopted river corridor protection recover from flood disasters. The ERAF provides state funding to match federal public assistance after federally-declared disasters. Eligible public costs are reimbursed by federal taxpayers at 75%. For disasters after October 23, 2014, the state will contribute an additional 7.5% toward the costs. For communities that take specific steps to reduce flood damage the state will contribute 12.5% or 17.5% of the total cost. To qualify for the 17.5% state contribution, communities must have updated bylaws that protect river corridors. To learn more about updating bylaws to protect river corridors, refer to the [Flood Ready Vermont Resources page](#).